



**PRESERVE YOUR TREASURES  
SO YOU CAN  
COME BACK AGAIN AND AGAIN  
BRING FAMILY AND FRIENDS**

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CBOCS**

**FISHING CREEK  
WATERSHED**

**TREASURES  
OF FISHING CREEK**





# Fishing Creek History

Fishing Creek is indeed a treasure! It is treasured not only for its scenic beauty and bounty of wildlife, but also for its contribution to the history of the Town of Chesapeake Beach.

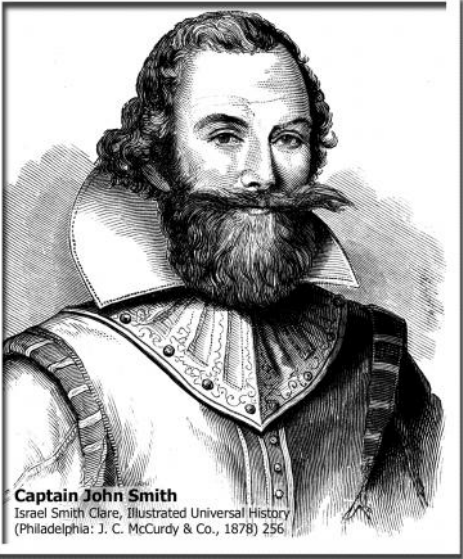
The formation of the Chesapeake Bay goes back 35 million years. Since then, ice ages and climate changes have all contributed to the size and shape of the Bay we see today. More than 100,000 streams, creeks and rivers thread through the Chesapeake Bay watershed. Fishing Creek is one of those tributaries.

Fishing Creek is documented on many early maps, including the maps of Captain John Smith. He cited the location of the Creek in the summer of 1608. Based on his diaries, his exploration party probably spent the night between what we now call Fishing Creek and Randle Cliff. He noted that the waters north of the cliffs were full of woods, and were well stocked with wolves, bears, deer and other wild animals. The streams were “crystal clear and full of fish.” Although

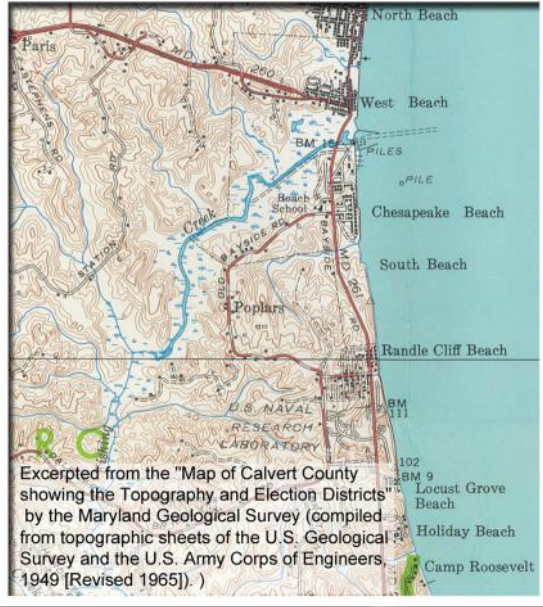
Native Americans, Patuxents, lived in Calvert County, John Smith did not see any people on his sleepover in Chesapeake Beach.

The area around Fishing Creek did not become very populated until after 1894, the year the Town of Chesapeake Beach was incorporated. The Town was created for the purpose of connecting Washington, D.C. by railway, with a new resort which was being created along the shores of Chesapeake Bay. The railway builders had many obstacles to overcome, including crossing Fishing Creek in two places and dealing with the marshy land and smaller streams on both sides of the mouth of the Creek. They

decided to re-direct some of the Creek, by dredging a half mile canal, 60’ wide and 20’ deep, which is the straightest part of the Creek you see today. The results of the dredging were used to fill in the swamp on the north side where Kellam’s Field and the Town Hall are



Captain John Smith  
Israel Smith Clare, Illustrated Universal History  
(Philadelphia: J. C. McCurdy & Co., 1878) 256.



Excerpted from the "Map of Calvert County showing the Topography and Election Districts" by the Maryland Geological Survey (compiled from topographic sheets of the U.S. Geological Survey and the U.S. Army Corps of Engineers, 1949 [Revised 1965]).

now located, and on the south side where the Railway Museum is now located.

The Chesapeake Beach Railway brought thousands of visitors to the Beach, each getting a firsthand look at Fishing Creek as the train ran alongside the picturesque waterway, which had been nicknamed “Honeysuckle Route.” Sadly, the train stopped running in 1935, partly due to the Great Depression gripping the whole country.

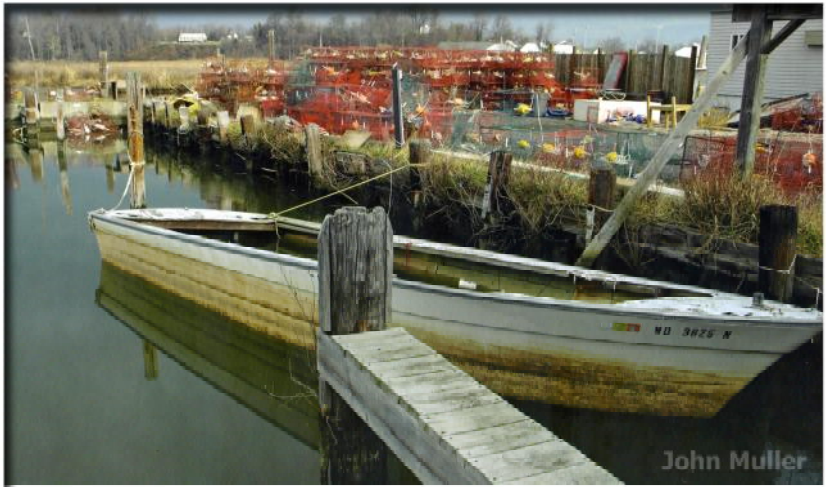
In the winter of 1934, a program of President Roosevelt’s New Deal put men to work in the Beaches. They drained parts of Fishing Creek’s marshy areas in an effort to control mosquitoes.



Long after the last train had left the station, Mayor Bruce Wahl moved to town and started to investigate the possibility of using the abandoned rail bed along Fishing Creek as a Rail Trail. Like the early dreamers of the Railway, there were many obstacles to cross, and it took the Town more than 20 years for Mayor Wahl’s dream to come true!

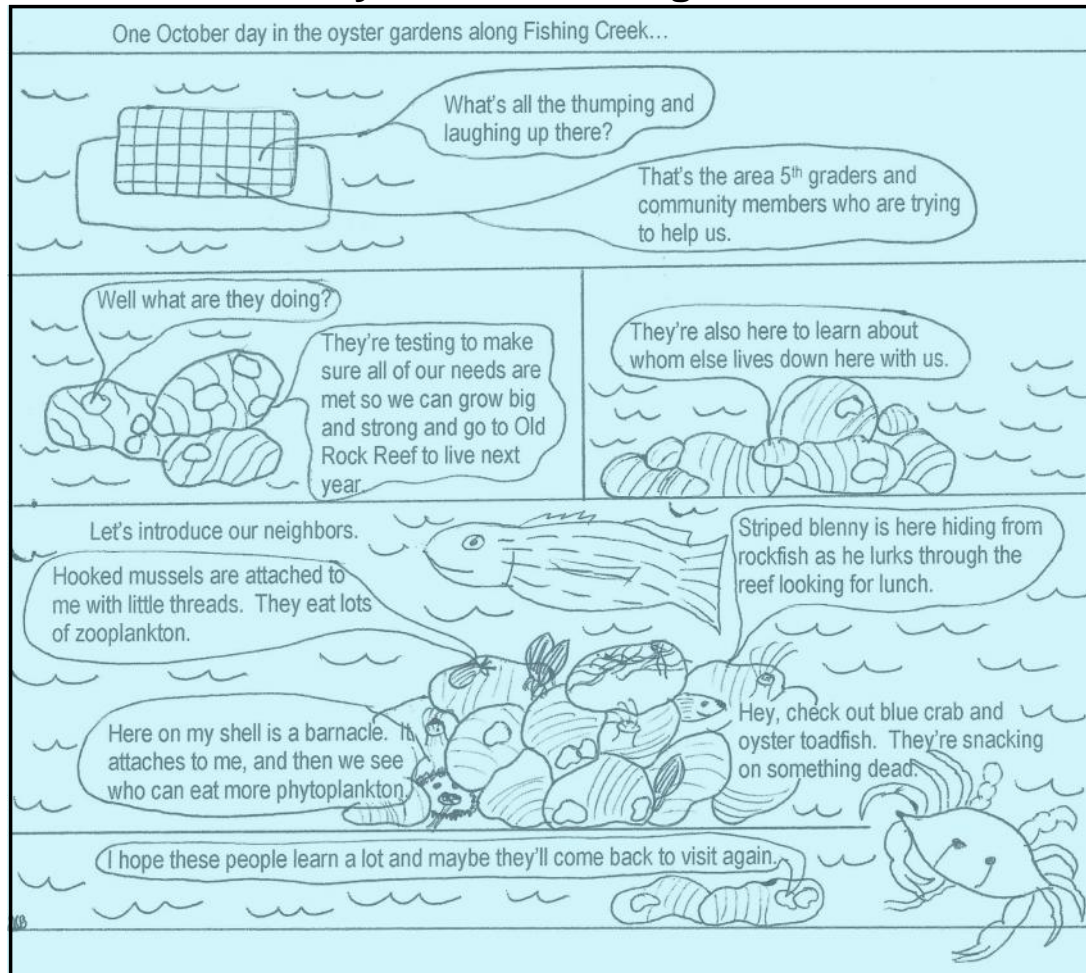
Another dream has come true under the Rail Trail... The Chesapeake Beach Oyster Cultivation Society (CBOCS) has been using the protected waters of Fishing Creek to grow baby oysters to help replenish the Bay with this wonderful seafood.

Fishing Creek is an important landmark that provides home to many plants and animals, as well as water-related businesses such as fishing, crabbing, trapping, canoeing, and restaurants with a great view. Enjoy this activity booklet that describes some of the things you can see, hear and do when you go up the Creek!!





## Oysters of Fishing Creek



Count, record and measure oyster spat on 5 shells  
 Number of oyster spat \_\_\_\_\_ Average per shell \_\_\_\_\_  
 Average size of spat \_\_\_\_\_ mm, Range \_\_\_\_\_ to \_\_\_\_\_ mm

## Oysters of Fishing Creek

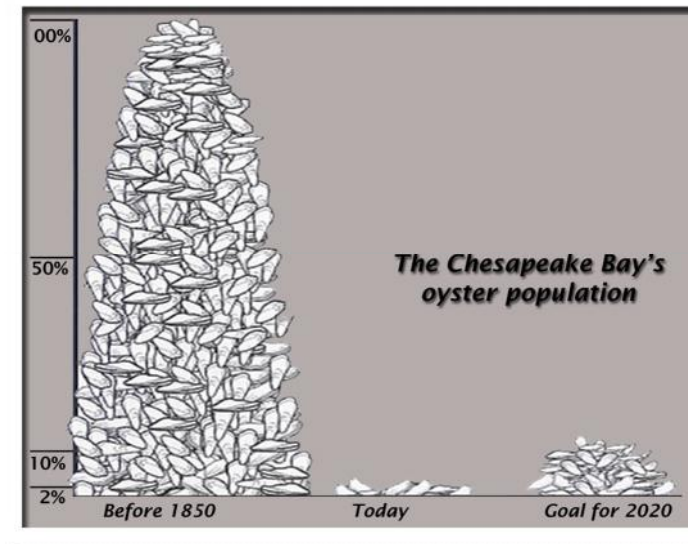
The oyster is a "bivalve" mollusk. This means they have two ("bi") hard shells ("valves") and a soft body protected by the shells. There are many kinds of oysters; however, the oysters that live in the Chesapeake Bay are the "Eastern Oyster." Their scientific name is *Crassostrea virginica*.

An oyster shell grows in layers, starting from the pointed end. It takes about a year to grow one inch. Although it doesn't look like it, each oyster has a mouth, stomach, gills, heart, digestive system and muscles - they all work together to bring water in and through its body.

Oysters are "filter feeders" and this is why they are so important to the health of the Chesapeake Bay. They help improve and maintain the water quality by removing algae, which they eat, and sediment from the water column. The sediment and other indigestible bits are excreted as little pellets called pseudo-feces that drop to the Bay floor. A single adult oyster can filter up to 50 gallons of water per day. Filtering helps improve oxygen levels, and allows more light to penetrate the water, permitting important submerged aquatic vegetation to grow. A handful of oysters can clear a small aquarium filled with cloudy Bay water in less than an hour! Now imagine what



the Bay would look like if wild oyster populations were restored to the levels found in the 1800s.



Oysters anchor themselves to hard surfaces in the water. As other oysters attach themselves to each other, they form huge clusters called oyster "reefs," which provide a habitat for many Bay creatures, including barnacles, mud crabs, blue crabs and rockfish.



## Residents of Fishing Creek

### Great Blue Heron

- Largest wading bird in the United States, and is present in the area year-round
- Eat mostly fish, but will also eat frogs, insects, shrimp, crabs, and small mammals
- Will use its sharp beak to spear food and then swallow it whole



Photo credit: flickr user gdahlman

### Red-winged Blackbird

- Songbird that lives in the area year-round
- Eat seeds, grains, insects, and sometimes frogs and snails
- Males have red and yellow markings on their shoulders, but females are all brown and black



Photo credit: flickr user cuatrok77

## Residents of Fishing Creek

### Bald Eagle

- Large bird of prey with a wingspan of 6-7 ft.
- National bird of the United States of America
- Eat mostly fish and build some of the largest nests of any bird
- Adults have white feathers on head and tail and dark bodies



Photo credit: Amenda and Dennis Brown

### Chesapeake Blue Crab

- Crab is green-blue but turns red when cooked
- Commercially and recreationally important in the area
- Will eat just about anything it can find
- Uses its back legs as paddles for swimming



Photo credit: flickr user lulucat



## Residents of Fishing Creek

### Striped Bass (Striper, Rockfish)

- State fish of Maryland, commercially and recreationally important in the area
- Silvery color with dark stripes, can weigh up to 100 lbs.
- Eat smaller fish



Photo credit: Lake Meade Imagery

### North American River Otter

- Live in close families and love to play
- Eat fish, crayfish, frogs, and insects
- Build dens near the edge of the water
- Have webbed feet and use their tail to help swim more quickly



Photo credit: flickr user Jason Pratt

## Residents of Fishing Creek



Photo credit:  
flickr user AcrylicArtist

### Osprey



Photo credit: Beades

### Northern Water Snake



Photo credit: flickr user stevehdc

### North American Beaver



Photo credit: flickr user Jim-The-Photographer

### Yellow Swallowtail Butterfly



Photo credit: Derek Ramsey

### Sweetgum

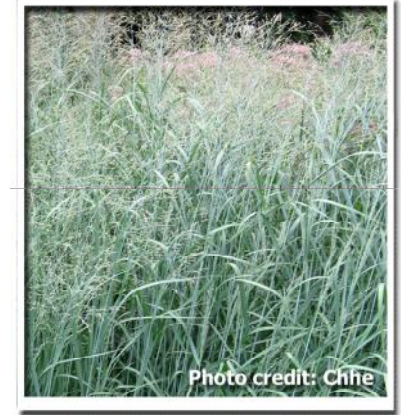
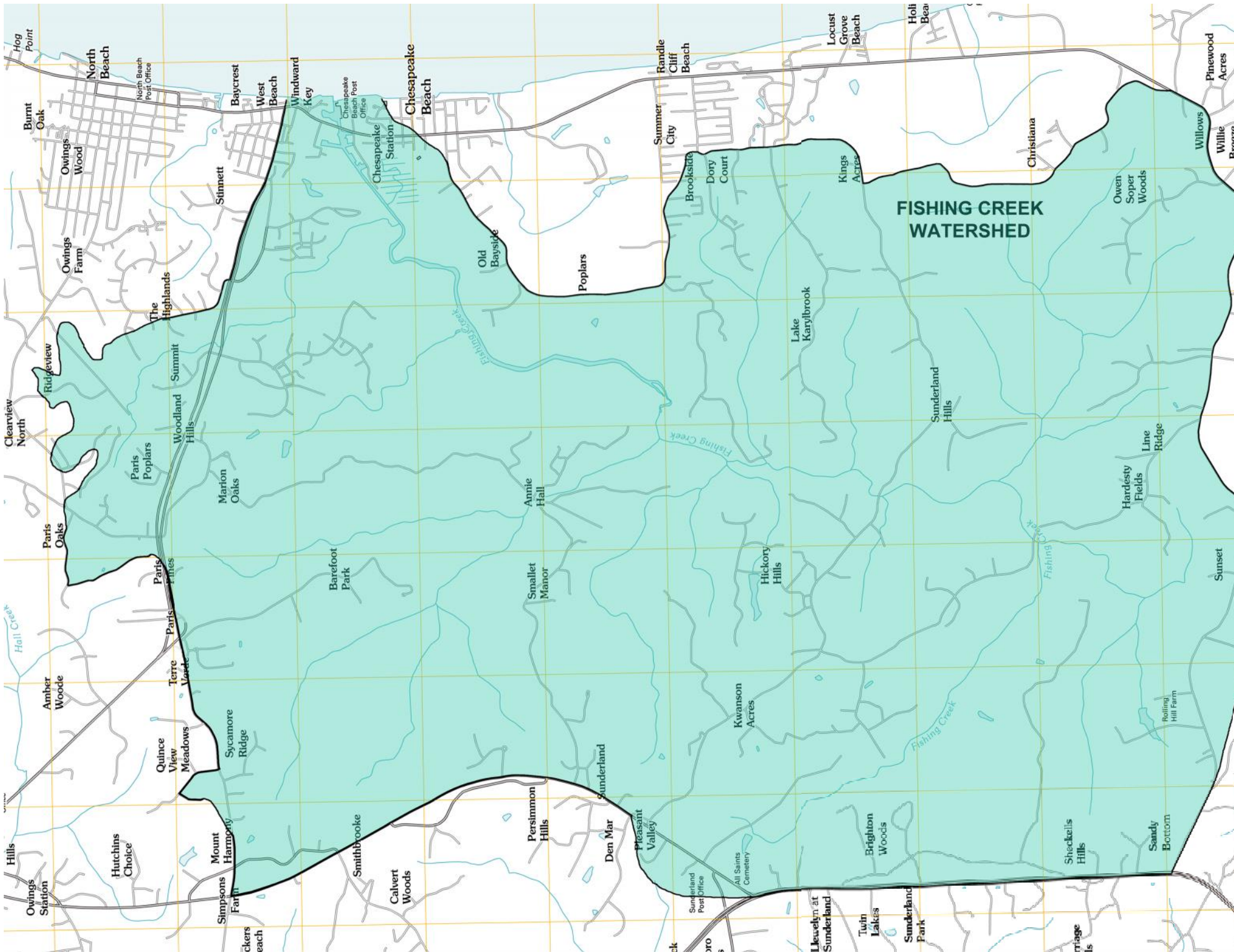


Photo credit: Chlie

### Switchgrass





## Fishing Creek Watershed

Fishing Creek is located in Northern Calvert County, Maryland. It empties into the Chesapeake Bay at Chesapeake Beach. The vast majority of the watershed is rural, consisting mostly of forest and farmland. A small portion encompasses planned subdivisions and the town of Chesapeake Beach.

Using the grid on the map, determine the size of the Fishing Creek Watershed. Each square equals 0.37655 square miles.

Your calculation is \_\_\_\_\_ square miles.

Trace all the branches of Fishing Creek.

To obtain a satellite map of Fishing Creek go to [www.earth.google.com](http://www.earth.google.com)



## Observation Questions:

### Birds:

Where was the bird you saw?

What was it doing?

What evidence of birds did you see today?

What was the biggest bird that you saw today?

What was the smallest bird that you saw today?



### Fish or amphibians or reptiles:

Where was the fish you saw?

What did it seem to be doing?

Where was the reptile (turtle?) that you saw?

What did it seem to be doing?

How many did you see?



### Animals:

Which animals did you see today?

What evidence of animals did you see?

What was the animal doing?

## Directions:

Turn and face the Bay. You are now facing East.

Turn to your right. What direction are you now facing? (South)

What man-made items do you see?

What natural items do you see?

Turn to your right again. What direction are you now facing? (West)

What man-made items do you see?

What natural items do you see?

Turn to your right again. What direction are you now facing? (North)

What man-made items do you see?

What natural items do you see?

### Face the Bay again:

When you look East, why is Fishing Creek such a straight line?

When you look West, why is Fishing Creek such a curvy line?

### Watch and Listen: (over PawPaw Gut / at Trail's end)

Face South. Be silent for 60 seconds. What do you hear? What do you see?

Face North. Be silent for 60 seconds. What do you hear? What do you see?





## Water Quality Definitions, Measurements and Calculations

Physical and chemical parameters are necessary to determine the health of Fishing Creek oysters and the pollutants flowing to Chesapeake Bay. This activity includes recording that information and making determinations about the health of Fishing Creek.

### Measure and record oyster health parameters

| Parameter        | Acceptable Range | Your Reading | Good/Bad |
|------------------|------------------|--------------|----------|
| Dissolved Oxygen | > 3.0 mg/l       | _____        | _____    |
| Salinity         | > 0.5 ‰          | _____        | _____    |
| pH               | 6-8.2            | _____        | _____    |
| Temperature      | 0-30° Celsius    | _____        | _____    |
| Turbidity        | >50 cm or 0.5 m  | _____        | _____    |

mg/l = milligrams per liter      C = Celsius      cm = Centimeter, m = Meter



## Stream Flow Measurements and Calculations

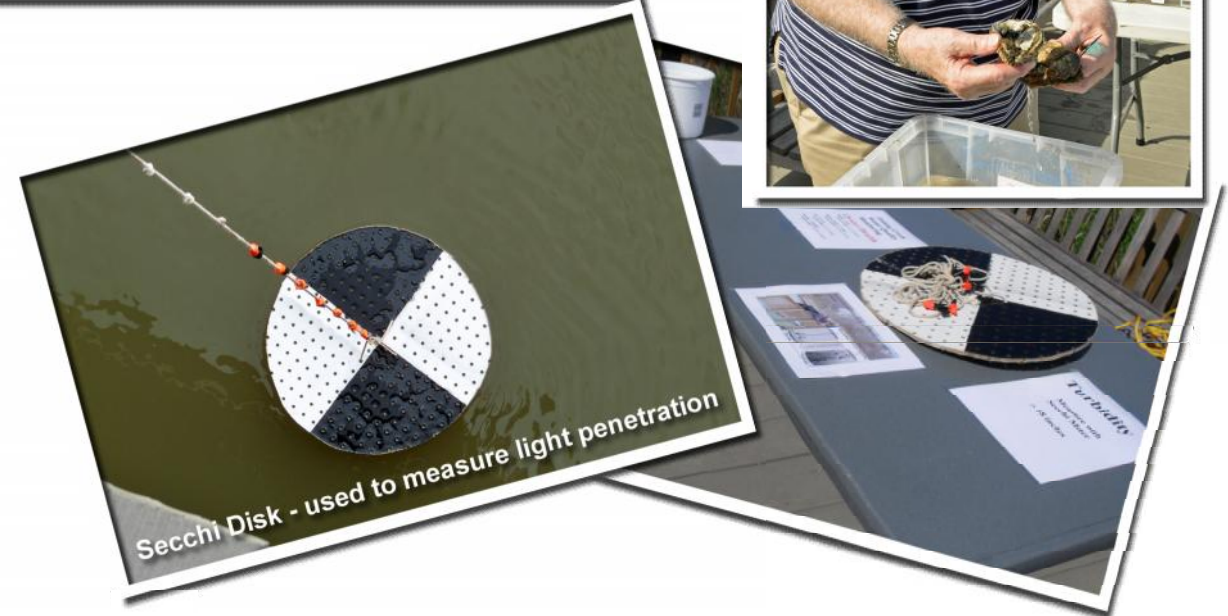
Net stream flow in a tidal creek requires measuring both tide in and tide out. Today we are measuring (tide in) or (tide out). You determine!

Using bottle floats record time \_\_\_\_ minutes \_\_\_\_ seconds to travel \_\_\_\_ feet

Calculate flow in feet per minute \_\_\_\_, miles per hour \_\_\_\_

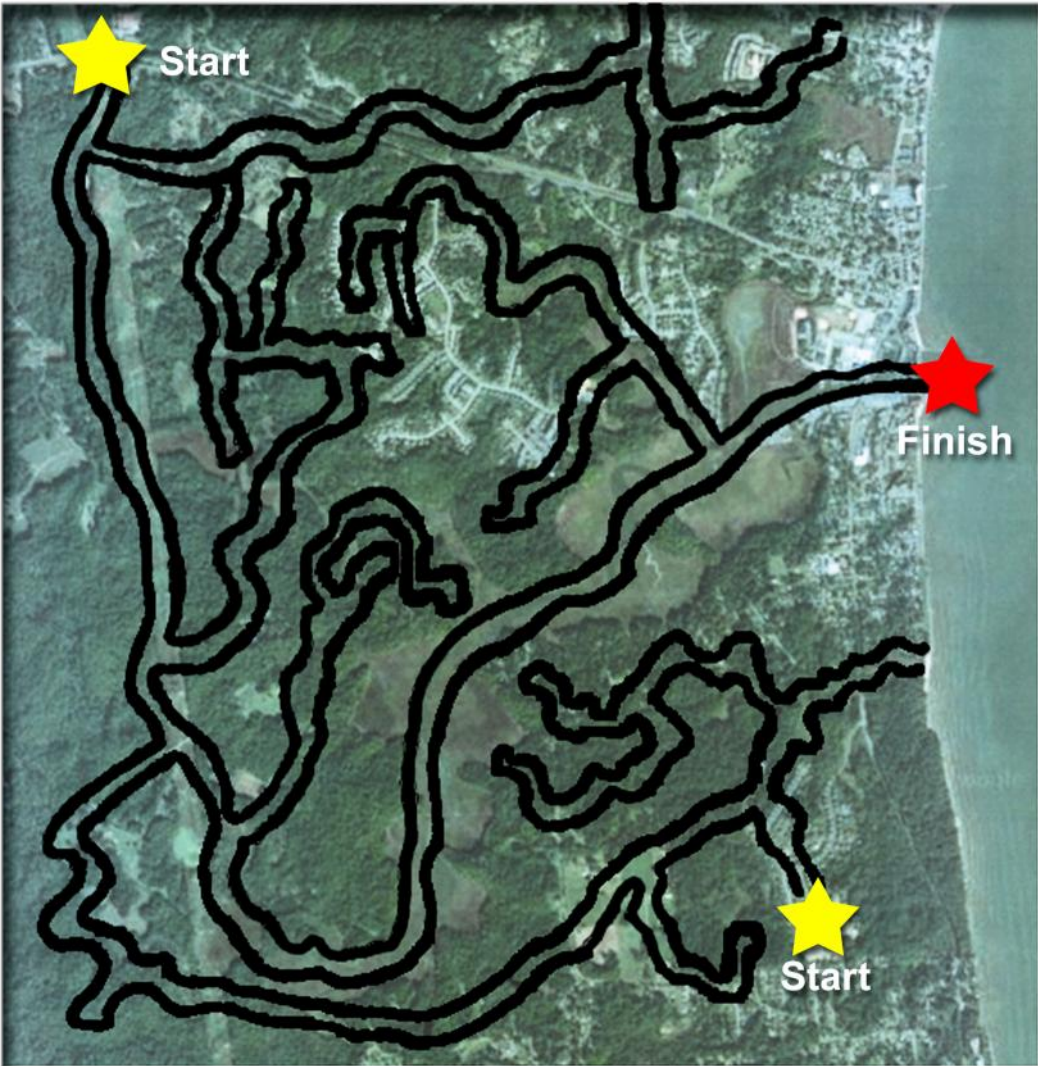
Cross section area of Fishing Creek is 750 square feet

Calculate water flow (feet per minute X 750 X 7.485) = \_\_\_\_ gallons per minute





Fishing Creek Watershed Maze



Fishing Creek Treasures Word Search

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
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- |                   |               |                 |
|-------------------|---------------|-----------------|
| BALD EAGLE        | BEAVER        | BLACK CHERRY    |
| BLACK LOCUST      | BLACKBIRD     | BLUE CRAB       |
| CALVERT COUNTY    | CANADA GOOSE  | CHESAPEAKE BAY  |
| CHESAPEAKE BEACH  | DEER          | ECOSYSTEM       |
| FILTER FEEDER     | FISHING CREEK | FOX             |
| HERON             | MALLARD       | MARYLAND        |
| MONARCH BUTTERFLY | MUSKRAT       | NITROGEN        |
| OSPREY            | OXYGEN        | PHOSPHORUS      |
| POTASSIUM         | RAILROAD      | RAILWAY TRAIL   |
| REEF              | RIVER OTTER   | ROCKFISH        |
| SALINITY          | SEAGULL       | SNAPPING TURTLE |
| SPAT              | SWEETGUM      | SWITCHGRASS     |
| TERRAPIN          | WATER SNAKE   | WATERSHED       |
| WETLAND           | WOOD DUCK     |                 |



Color Me Now or Color Me Later!

## Great Blue Heron



## Red-winged Blackbird



## Notes & Sketches!

To learn more about Fishing Creek

### Places:

Calvert Library Twin Beaches Branch 3819 Harbor Road, Chesapeake Beach, MD 20732  
410-257-2411

Chesapeake Beach Railway Museum 4155 Mears Avenue, Chesapeake Beach, MD 20732  
410-257-3892

Chesapeake Beach Town Hall 8200 Bayside Road, PO Box 400, Chesapeake Beach, MD 20732  
410-257-2230

### Books:

*The Heritage of Calvert County, Maryland for the Young Reader*, by Susan M. Sieglein

*John Smith's Chesapeake Voyages: 1607-1609*, by Helen C. Rountree, Wayne E. Clark, and Kent Mountford

*Otto Mears Goes East: The Chesapeake Beach Railway*, by Ames Williams

### Websites:

[www.chesapeakebay.net/](http://www.chesapeakebay.net/)

[www.dnr.state.md.us/bay/cblife/](http://www.dnr.state.md.us/bay/cblife/)

[www.chesapeakeconservancy.org](http://www.chesapeakeconservancy.org)

[www.co.cal.md.us/](http://www.co.cal.md.us/) Click on County Maps

[www.dnr.state.md.us/wildlife/Plants Wildlife/](http://www.dnr.state.md.us/wildlife/Plants_Wildlife/)